NOTES ON ENDEODES LECONTE WITH A DESCRIPTION OF A NEW SPECIES FROM BAJA CALIFORNIA

(Coleoptera: Malachiidae)

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In this paper, a new species of *Endeodes* is described from Baja, California, Mexico; one previously described species is treated as a synonym, and some notes on habitat and extensions of range are recorded.

The genus *Endeodes* is known only from the marine littoral of the Pacific Coast of North America. Two of the species of the genus *(basalis* and *blaisdelli)* are found abundantly only south of Point Conception, California, and have several characteristics in common which they do not share with the three more northern species. The two southern species are found from May to November, almost exclusively under debris, largely dried seaweed, just within the reach of the highest tides on the sandy beaches in association with the much more abundant *Phyconomus marinus* (LeConte) and *Epantus obscurus* (LeConte). In each of the southern species the elytra are at least twice as long as wide, so that they normally cover part of the abdomen. In the three more northern species, the elytra are very much shorter, each elytron being very little longer than wide, so that it does not extend over the abdomen.

I have found two of the latter species *(insularis* and *rugiceps)* in September and October, largely in association with *Thallasotrechus* in cracks in the rocks which were exposed at low tide. Extensive collecting on the sandy beaches uncovered a few specimens of *collaris* on one occasion under a sheet of galvanized iron and, although *Epantis obscurus* (LeConte) and *Phyconomus marinus* (LeConte) were both common in this area, I was unable to find *Endeodes* associated with them. Blackwelder (1932) states that his specimens were taken largely under driftwood.

Blackwelder's excellent revision of the genus (Pan-Pac. Ent., VIII, p. 128, 1932) is sufficient for easy identification of the previously known species, but a new key is presented here to include the new species which cannot be incorporated with his key.

A Key to the Species of Endeodes LeConte

1. Each elytron at least twice as long as wide 2
   Each elytron not much longer than wide 3
2. Elytra concolorous, ferruginous . . . . . *blaisdelli*
   Elytra of bicolorous, ferruginous basally and black apically . . *basalis*
3. Legs, antennae, and mouthparts darker than thorax 4
   Legs, antennae, and mouthparts pale . . . . . *insularis*
4. Head black . . . . . *collaris*
   Head reddish . . . . . *rugiceps*

The following notes record some new localities and extensions of range for some of the species.

Endeodes blaisdelli Moore, new species

Color ferruginous; abdomen, eyes and tips of mandibles black. *Head* about as long as broad, covered with a fine, pale, sparse pubescence. Eyes with a few very short hairs between the facets. Labrum and clypeus slightly paler than head. *Pronotum* a little broader than long, widest at about the apical third, considerably narrowed at base, sides rather evenly arcuate, pubescence as on head. *Elytra* concolorous, pale ferruginous throughout, somewhat translucent, the dark color of the abdomen showing through the posterior fourth. Each elytron about twice as long as wide, only slightly expanded apically, conjointly nearly forming a square, sutural margins meeting for their entire length, apical margins nearly straight and truncate at right angles to the sutural margins with narrowly rounded internal angles and broadly rounded external angles. Elytra clothed in a fine sparse pubescence with a few scattered erect setae. *Legs* entirely ferruginous except for the black comb of setae on the second segment of the front tarsi in the male. Tibiae covered with short setae which are denser on apical half of middle tibiae. *Abdomen* shining black, a little lighter beneath, with a very fine, sparse pubescence which is a little longer below than above. Length 4.5 mm.

Male with second tarsal segment of anterior tarsus expanded over third, terminating in a comb of stout, dense, black setae.

Female with anterior tarsus simple.

Holotype (Calif. Acad. Sci.) male, from Colonia Guerrera Baja California, Mexico, August 19, 1950. *Allotype* (Calif. Acad. Sci.) female, same data as holotype. *Paratypes* sixty-seven specimens from Colonia Guerrera, Baja California, Mexico, August 19, 1950, and one specimen from the same locality, May 28, 1950. Two paratypes have been deposited in each of the following collections: U. S. National Museum, Washington, D. C.; Museum of Comparative Zoölogy, Cambridge, Mass.; American Museum of Natural History, New York City; Chicago Natural History Museum; Canadian National Collection, Ottawa; British Museum, London; Collection of Dr. R. E. Blackwelder, Washington, D. C.; San Diego Natural History Museum, San Diego, Calif. Ten para-

types are in the collection of the California Academy of Sciences, San Francisco, and the remainder in my own collection.

The sixty-nine specimens collected on August 19, 1950, including the holotype and allotype, were taken from one very limited section of beach under small patches of dry seaweed, mostly rockgrass mixed with some kelp. The beach here is backed up by high sand dunes extending south from the mouth of the Santo Domingo River and gradually diminishing in size to near the salt marshes north of San Quintin Bay. In about the middle of this area, where the beach was slightly arched to seaward, a very high tide had cut away the sand, leaving a bank about a foot high and a thousand yards long. All the specimens were found within a belt about two feet wide to seaward of this undercut, and were more or less regularly scattered along its entire length. The beach, for its entire length, in a belt about twenty feet above and ten feet below the populated strip, was covered with similar patches of seaweed; however, not a single specimen was found elsewhere after several hours of careful searching.

This species is most nearly related to *basalis* by the length of the elytra, but can be distinguished from it at once by the concolorous elytra. It also differs from that species in the shape of the elytra, which are strongly truncate and more nearly rectangular. There is almost no variation in color in my entire series, and very little variation in the shape of the elytra and the shape of the pronotum.

This species is named for the late Dr. Frank E. Blaisdell, whose unlimited generosity with his own time was so helpful to me and to many others.

ENDEODES BASALIS (LeConte)

I am unable to draw a line of distinction between *basalis* and *abdominalis* in regard to the color of the abdomen or the shape of either the pronotum or the elytra, and I can find no other consistent difference to separate them. In my series of 245 specimens, there are twenty-two with the abdomen either entirely yellow or entirely ferruginous, and forty-four with it entirely black. The remaining 181 specimens display every gradation of color between the two extremes. Over 100 of these have the abdomen largely reddish with several small to large patches of black; and a few specimens have the abdomen largely black with indistinct orange patches. Some specimens have light smoky or dark smoky abdomens. In a small series of specimens collected at La Jolla, California, the abdomen

is a clear yellow rather than ferruginous; and the clypeus and labrum are opaque cream color in contrast to the translucent ferruginous color of these parts in specimens of a more reddish cast. However, there are specimens which seem to be intermediate between these and the rest of the series; and they appear to possess no other consistent characters for their separation. Variations in the shapes of the elytra and pronotum are just as great as those of color, and show no correlation with each other or with the variations of color of the abdomen. I can only assume that they are color variations of a single species.

Previously known from San Luis Obispo County to San Diego County, California. I have collected a large series of all color varieties except pure yellow, from Halfway House, Descanso Bay, Baja California, Mexico, in July and August; and four specimens of both black and mixed colors from Sausal, Baja California, Mexico, in July. A series of specimens showing the range of variation has been deposited in the entomological collections of the California Academy of Sciences, San Francisco.

ENDEODES INSULARIS Blackwelder

Previously known from San Miguel Island and the adjacent Prince Island, California. I collected three specimens at Gaviota State Park, Santa Barbara County, California, in October. The islands are almost due south and nearly opposite this part of the mainland. My specimens were taken in company with *Thallasotrechus nigripennis* Van Dyke from cracks in a tilted sedimentary sandstone formation which was exposed by the low tide. They were found below the mean high water mark.

ENDEODES COLLARIS (LeConte)

Known from Vancouver Island, British Columbia, south to Monterey County, California. I have taken it in October from cracks in the rocks below mean high tide in association with *Thallasotrechus nigripennis* Van Dyke and *Liparocephalus* at Moss Beach, San Mateo County, California; and from beneath a sheet of galvanized iron on the sandy beach above the high water mark at Santa Cruz, California, in October.

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